

Response to Aurora Organic Dairy's 2/11/05 Comments to the NOSB
Compiled by Kathie Arnold
Truxton, NY
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All following text in italics is direct quotes from Aurora Organic Dairy's 2/11/05 comments to the NOSB.

1. Aurora Organic Dairy states in their public comment: *"Our company is in full compliance with the NOP Rules as currently interpreted."* (Page 3 Paragraph 1)

-Not as interpreted by the vast majority of certifiers in the US, consumers, or other organic dairy producers. This then shows that interpretations of the Rule concerning pasture can be way too vague if it allows ruminants to be off pasture and in a confinement lot for months during the grazing season.

2. *"the study of pasture needs to account for different amounts of rainfall and water resources, and include recommendations on how to optimize pasture in arid and water-short areas where water conservation is paramount."* (page 3, 2nd paragraph)

-In a sustainable organic farm system plan, the water consumed should not exceed the water resources of the land base as supplied by natural precipitation. Sites for organic farms need to be chosen for a good ecological fit between the environment and the farm. If there isn't a good fit because inadequate rainfall precludes pasture, then organic dairy production should not be undertaken at such sites.

- Aurora stored feeds are grown in this "water-short" area. If these crops are grown, so can pasture by the same means. Pasture should be seen as the most valuable crop, not just only what plants happen to grow without management.
- If the area is so water short, why is it a site for thousands of animals who need gallons of water intake each day? Roughly one-half gallon of water is needed for every pound of milk produced when on a dry feeds ration. Thus a herd of 5000 cows in an arid region may need approximately 175,000 gallons of water intake per day for the cows alone
- If the area is so water short, why is it a site for a milking and processing facility that needs hundreds or thousands of gallons of water daily to operate?

-The NOP pasture guidance documents need not address different species or types of pasture, growth rates, land productivity, precipitation patterns unique to an area nor recommend how a producer is to utilize this resource, since it is extremely variable even within a given environment, requiring continual dynamic management and in no way bears on the necessity of pasture in the dietary requirements for organic dairy animals. (Holistic Management has a very well developed system for pasture management in brittle environments.)

3. *"For these animals of greater productivity, supplemental feeding is required, regardless of climate or season, to keep energy intake high enough to balance the animals' use of energy for milk production and general health....If a pasture policy with restrictive rules were to be implemented without sufficient study of the impact of diet and health across climates, seasons and animal life stages, it could result in an imbalance of dietary intake and energy needs leading to decreased animal health."* (page 3, paragraph 3)

-Many studies have already been done looking at supplementation for various levels of production, there is already vast farmer experience in this area in this country and abroad--no further study is needed to

validate pasture as a viable feed source for cows. No one is suggesting that supplemental feeds cannot be fed organic cows while on pasture.

-There are many consultants who can help producers who don't have good pasture know how or management skills to properly implement a grazing system to provide significant amounts of pasture to their cows in a healthy way. There are also numerous books and magazines on the topic of pasture, relating research as well as real time farm experiences with pasture. Nutritionists know how to balance rations for life stage, production, and environment.

4. *"studies have shown that the switch from a mixed ration diet, such as that used in the wintertime in northern climates, to a summertime diet based primarily on pasture, leads to a decrease in body condition score and general health and is accompanied by a decrease in milk production".* (page 3, paragraph 4)

-Reference is made to a paper by Kolver and Muller from 1998. The Aurora document claims "... a summertime diet based primarily on pasture, leads to a decrease in body condition score and general health and is accompanied by a decrease in milk production (Kolver and Muller, 1998)". AOD is not accurate as to the conclusions reached by Kolver and Muller--the word "health" does not occur, and "a decrease in general health" is not documented by these authors."

-The paper by Regula and colleagues is a comparison between tie-stalls with 0 or 1 days of outdoor access per week in winter, tie stalls with 3-4 days of outdoor access per week in winter, and loose housing with 6-7 days of outdoor access per week in winter. In all herds, there was grazing for 6-7 days per week in the summer. This is how the different systems compare in terms of health:

- general health status - no difference
- respiratory problems - no difference
- diarrhea - no difference
- mastitis - no difference
- claw disorders - no difference
- lameness - more in the herds with 0-1 days outdoors than in the other herds
- skin lesions around hock - more in tie-stall herds than loose housing herds with daily outdoor exercise; fewer if the cows were allowed to exercise irrespective of weather. (as opposed to: only in good weather)
- skin lesions around carpal joints in front legs - more in tie-stall herds than loose housing herds with daily outdoor exercise; fewer if the cows were allowed to exercise irrespective of weather (as opposed to: only in good weather)
- teat injuries - more in herds with 0-1 days outdoors than in other herds.

The authors state "the results of this study shows that several indicators of health and welfare were better in loose-housing systems with regular outdoor access compared to tie stalls (especially tie stalls with minimal exercise in winter)." They go on to say that "several of the favorable influences of loose-housing and regular outdoor exercise observed in this study are in accordance with results from other studies." And they conclude "Keeping cows in loose-housing systems combined with regular exercise outdoors was associated with substantially better health and welfare of the animals. Regular exercise also was beneficial for cows kept in tie stalls with respect to lameness and teat injuries". There is no basis for the Aurora claim that this study shows that "animals that were switched yearly from wintertime indoor confinement to summertime pasture were shown to have greater problems". That is not what the authors of the paper say. All animals in their study, irrespective of housing system, were indoors in winter and on

pasture in summer. Rather, the authors say "the more exercise, the better." They don't say anywhere that the "switch" that Aurora mentions has a negative effect.

- Balancing pasture and supplementation is a matter of management. Many pastured herds have achieved both high levels of pasture intake and high levels of milk production.

- The goal of organic dairy production is not to optimize milk output at the expense of not allowing the cows to be part of their natural environment, doing what comes naturally for them--grazing. Just because cows have the possibility of lowered milk production in a pasture system does not mean that they shouldn't be grazed. The organic standards are not meant to guarantee or even enable maximum yield--either from crops or livestock. That is what high yield, high stress, conventional agriculture is all about, but not what organic agriculture is about.

5. *"Another area of concern that we recommend studying pertains to the effects on both animal and human health from having animals in contact with wildlife, leading to possible transmissions of communicable diseases"* (Page 4, 1st paragraph)

- On page 4 of Aurora comments: "Researchers (Renter et al., 2001) reported evidence of E. coli O157:H in deer sharing pasture with cattle." Not true. Renter detected 4 fecal samples from hunted deer (out of 1608 samples tested). There is no evidence presented that these deer were sharing pasture with cattle. Renter does raise the possibility in the discussion of his paper that deer-feces could contaminate water and/or infect livestock. That is a valid concern. But the "evidence" Aurora claims is not presented.

- Problems stemming from transmission of wildlife disease are a rare occurrence and if a concern does exist in a geographic area, vaccination is an available management tool for many such diseases.

- Normal in all ecosystems. What studies support or public health records suggest these diseases have occurred due to cows on pasture as the vectors to humans?

6. *"Any possible USDA guidance document regarding pasture policy must incorporate the full spectrum of research and the findings of these studies."* (page 4, paragraph 2)

- While further research on organic dairying is most welcome, enough research has already been done by USDA pasture research labs, NRCS, and many other bodies in the US and around the world to show that pasture is a production system that is healthy for both the land and the animals. And who is man to say that a confinement system he has designed is superior to what nature designed. Cows have spent centuries receiving their nutrition from pastures and it is only in recent decades that they have been taken off pasture and put into total confinement systems. Organic production's basic premise is to work in tune with nature and the natural processes of livestock.

7. *"In all of the review, discussion and analysis of the rule regarding "access to pasture," the #1 consideration should always be animal health."* (Page 4, paragraph 3)

- The most valid measures of animal health must include cull rates, death losses, and veterinarian expenses per cow. Studies of pasture based production systems have consistently shown these indicators all point to improved animal health. For example, in Cornell's 2002 dairy farm business summary, the cull rates for conventional farms were 25% higher than cull rates for grazing farms. Vet and medicine costs were 67% higher for conventional farms than grazing farms.

-Access to pasture is a required part of the rule. If other parts of an organic herd's production system such as grain feeding practices, three times a day milking, choice of genetics, poor farm site selection, etc., are such that putting cows on pasture is seen as detrimental to the health of the cow, then it is those other practices, not the requirement to pasture, that needs to be reviewed and revised in light of the stress being placed on the animals.

8. *"Any conclusions about the relative merits of different management practices to optimize animal health, including recommendations regarding pasture, must incorporate these measures (BCS, SCC, % cows lying down, % chewing cud, integrity of skin, % with lameness, % with teat injuries, rumen health, % animal infected with pathogenic bacteria, % infected with parasites, reproductive health.) If any management practices are recommended or prescribed for the NOP or its guidance documents, they must demonstrate superiority across these measures to be considered truly better for animal health."* (page 4, paragraph 6).

- Body condition scoring is not necessarily a valid measure of health, unless it is extreme (<1.5 or >4.5), or if there is rapid loss of BCS in early lactation. Several studies have failed to find a relationship between BCS and subclinical mastitis, clinical mastitis or SCC (Zadoks, 2002). As far as integrity of skin, lameness and teat injuries, the study by Regula, 2004 supports more exercise as being better.

-Below are some of the studies already done that show even or better performance on most health measures for pastured cows versus confinement, from incidence of food borne pathogens, to mastitis, to cull rates.

Improving Milk Quality and Animal Health By Efficient Pasture Management-Summary

J. Woodrow Pankey, UVM, Dept. of Animal Science, 1989, SARE Funded

Three grazing systems: intensively managed rotational grazing (IMRG), traditional continuous grazing (TCG), and confinement housing (CH), were compared on seventeen Vermont dairy farms to determine if grazing systems had an effect on milk quality, animal health and reproductive efficiency. Analysis of variance, using a general linear means procedure, on monthly bulk tank milk samples for standard plate count were not significant at $P_{.05}$; however, differences indicated trends towards improved milk quality during the grazing season in pastured herds compared with confined herds. Mean standard plate count during May through October for IMRG herds and TCG herds (4.28×10^3 cfu/ml) and (4.97×10^3 cfu/ml) were lower compared with CH herds (12.67×10^3 cfu/ml).

Samples cultured on trypticase blood-esculin agar to determine total bacteria count and distribution of specific bacterial types and species, and somatic cell count (SCC) indicated differences during the grazing season towards lower mean counts of streptococci other than *Streptococcus agalactiae* in herds using IMRG (996 cfu/ml) compared with TCG and CH (2,242 and 1,416 cfu/ml). Mean CH (2.15×10^5 cells/ml) than either TCG or CH (2.15×10^5 cells/ml) during the grazing season.

Animal health and reproductive efficiency were evaluated by analyzing monthly reports by veterinarians incorporating barn records, DHIA test reports, and biweekly or monthly herd clinics. Mean occurrence of diseases, disease incidence densities, and estimates of risk were similar in all treatments for metabolic disorders, lameness and reproductive disorders. Udder disease, including clinical mastitis, udder edema, and teat injuries, were consistently less in herds managed on pasture compared with herds managed in confinement. When herds with fewer than 60 lactating cows were compared, incidence density of udder

diseases was .09 cases/animal month in IMPG, .03 cases/animal month in TCG, and .16 cases/animal month in CH.

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Controlling Pests of Pastured Livestock on Organic Farms

William Murphy, Coordinator, University of Vermont, 2001 Report Year

It seems that three possibilities exist that can help organic farmers produce livestock on pasture without excessive loss to parasites:

1. Use proper grazing management, based on three principals:
 - a) An adequate break in host availability results in death of most parasites on pasture. This has involved a break of 1 year, but our study indicates that an intervening harsh winter, followed by once-through grazing of young stock may be enough to sufficiently reduce parasite challenge to the animals. Mothers that consistently produce offspring that become excessively parasitized should be culled.
 - b) By the time animals are 1 year old they usually have developed resistance to internal parasites.
 - c) During their first year, animals need a low level of parasite challenge so their immune system develops resistance.
 2. Don't treat animals with any dewormer or change grazing management. This involves culling animals susceptible to parasite damage and probably results in heavy losses at first, but eventually results in a parasite-resistant flock or herd that can produce fairly well in harmony with the existing parasite population.
 3. Don't treat animals with any dewormer or change grazing management, but regularly sample feces of all mature animals and cull all, including their offspring, that develop high levels of fecal parasite eggs. This requires a great deal of work and is expensive, but results in a flock or herd that is resistant to parasites and produces at a high level.
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J Am Vet Med Assoc. 2002 Mar 1;220(5):645-9.

Prevalence of fecal shedding of Salmonella spp in dairy herds.

Huston CL, Wittum TE, Love BC, Keen JE.

Department of Veterinary Preventive Medicine, College of Veterinary Medicine, The Ohio State University, Columbus 43210-1092, USA.

OBJECTIVE: To estimate prevalence of Salmonella spp in Ohio dairy farms and to identify potential risk factors for fecal shedding of salmonellae. **DESIGN:** Cross-sectional study. **SAMPLE POPULATION:** 105 Ohio dairy farms. **PROCEDURE:** Individual fecal samples from all mature cows in study herds were tested for Salmonella spp by use of standard bacteriologic culture procedures. Herds were identified as infected if at least 1 cow was shedding Salmonella spp. Information regarding herd characteristics, management practices, and health history were collected. Potential risk factors for herd-level Salmonella infection were identified. **RESULTS:** In 31% of the study herds (95% confidence interval, 22 to 40%), at least 1 cow was shedding Salmonella spp. Six

percent of 7,776 fecal samples contained Salmonella organisms; prevalence within infected herds ranged from < 1 to 97%. Herd size, use of free stalls for lactating and nonlactating cows, and use of straw bedding in nonlactating cows were significantly associated with fecal shedding of Salmonella spp. as determined by use of univariate analysis. By use of multivariate analysis, large herds were more likely to be infected than smaller herds; however, no other factors were associated with Salmonella infection after adjustment for herd size. CONCLUSIONS AND CLINICAL RELEVANCE: Subclinical shedding of Salmonella spp is common in Ohio dairy herds, although we could not identify specific interventions that may influence the prevalence of Salmonella spp on dairy farms. It appears that large herd size and intensive management may provide an environment conducive to Salmonella shedding and chronic dairy herd infection.

Cattle and environmental sample-level factors associated with the presence of Salmonella in a multi-state study of conventional and organic dairy farms.

Fossler CP, Wells SJ, Kaneene JB, Ruegg PL, Warnick LD, Eberly LE, Godden SM, Halbert LW, Campbell AM, Bolin CA, Zwald AM.

University of Minnesota, College of Veterinary Medicine, 1354 Eckles Avenue, St. Paul, MN 55108, USA.

The objective of this study was to evaluate associations between cattle-level factors and environmental samples with the isolation of Salmonella from dairy farms in Minnesota, Wisconsin, Michigan, and New York. The study farms included 129 conventional and organic farms enrolled without regard to previous history of Salmonella infection. Herds were sampled at two-month intervals over a one-year period. Cattle groups more likely to be associated with Salmonella shedding (compared to preweaned calves) were cows designated as sick by farm personnel (OR=2.5, 95% CI: 1.7, 3.7), cows within 14 days of calving (OR=1.8, 95% CI: 1.1, 2.8), and cows due for culling within 14 days (OR=1.9, 95% CI: 1.0, 3.4). State of origin was also associated with the presence of Salmonella in samples from cattle and the farm environment; Midwestern states were more likely to have Salmonella-positive samples compared to New York. Cattle treated with antimicrobials within 14 days of sampling were more likely to be Salmonella-negative compared with nontreated cattle (OR=2.0, 95% CI: 1.1, 3.4). Farms with at least 100 cows were more likely to have Salmonella-positive cattle compared with smaller farms (OR=2.6, 95% CI: 1.4, 4.6). Season was associated with Salmonella shedding in cattle, and compared to the winter period, summer had the highest odds for shedding (OR=2.4, 95% CI: 1.5, 3.7), followed by fall (OR=1.9, 95% CI: 1.2, 3.1) and spring (OR=1.8, 95% CI: 1.2, 2.6). Environmental samples significantly more likely to be Salmonella-positive (compared to bulk tank milk) included, in descending order, samples from sick pens (OR=7.4, 95% CI: 3.4, 15.8), manure storage areas (OR=6.4, 95% CI: 3.5, 11.7), maternity pens (OR=4.2, 95% CI: 2.2, 8.1), haircoats of cows due to be culled (OR=3.9, 95% CI: 2.2, 7.7), milk filters (OR=3.3, 95% CI: 1.8, 6.0), cow waterers (OR=2.8, 95% CI: 1.4, 5.7), calf pens (OR=2.7, 95% CI: 1.3, 5.3), and bird droppings from cow housing (OR=2.4, 95% CI: 1.3, 4.4). Parity, stage of lactation, and calf age were not associated with Salmonella shedding.

PMID: 15698907 [PubMed - in process]
J Dairy Sci. 2002 Jan;85(1):105-11.

A study of the foodborne pathogens: Campylobacter, Listeria and Yersinia, in faeces from slaughter-age cattle and sheep in Australia.

Bailey GD, Vanselow BA, Hornitzky MA, Hum SI, Eamens GJ, Gill PA, Walker KH, Cronin JP.

New South Wales Agriculture Regional Veterinary Laboratory, Orange, New South Wales. In a study of faeces from 475 slaughter-age cattle and sheep from 19 herds or flocks, Campylobacter species (C. jejuni and C. coli) were cultured from all production systems studied and from 73.7 per cent (14/19) of herds or flocks. Within individual properties there was a higher prevalence in cattle than in sheep, with Campylobacter being most commonly isolated from feedlot cattle. The median prevalences and ranges were: for dairy cattle, six per cent (0-24%)*, feedlot beef cattle, 58 per cent (12-92%) pasture beef cattle, two per cent (0-52%), mutton sheep, 0 per cent (0-4%) and prime lambs eight per cent. *Listeria ivanovii* was cultured from one dairy cow but *Yersinia enterocolitica* was not cultured from any animal. *Campylobacter* is the leading bacterial causative agent of acute diarrhoea in humans in many industrialised countries. While the role of cattle and sheep in producing human campylobacteriosis either directly or via contaminated food, remains to be epidemiologically clarified, this study suggests that the production system, particularly for cattle, may be an important consideration.

*the dairy cattle in this study were all on pasture—note this difference in incidence between dairy cows on pasture versus the feedlot beef cattle

Zentralbl Veterinarmed B. 1990 Jun;37(4):276-82.

Epidemiological studies on the occurrence of *Listeria monocytogenes* in the feces of dairy cattle.

Husu JR.

National Veterinary Institute, Department of Bacteriology and Serology, Helsinki, Finland. Seasonal variation in the fecal shedding of *Listeria* spp. in dairy cattle was examined by collecting a total of 3,878 fecal samples during a period of two years. The prevalences of *Listeria* spp. and *L. monocytogenes* were higher during the indoor season (12.7% and 9.2%, respectively) than in samples collected from the animals on pasture (5.3% and 3.1%, respectively). The highest frequencies of *Listeria* spp. (19.4%) and *L. monocytogenes* (16.1%) were detected in December. *Listeriae* were isolated from at least one of the dairy cows from 45.8% of the 249 herds examined. 2.9% of the 314 milk samples collected from the farm bulk tanks on 80 dairy farms on four different occasions yielded *L. monocytogenes*. The seasonal occurrence of these bacteria in milk reflected the frequencies of *Listeria* in the fecal material but not those in the main roughage used; grass silage and pasture grass. Fecal material is considered to be a potential source of contamination of raw milk by *L. monocytogenes*. Investigation of the numbers of viable *Listeria* organisms in different animal fodders is considered essential in further epidemiological studies of these bacteria.

Reproduction, mastitis, and body condition of seasonally calved Holstein and Jersey cows in confinement or pasture systems.

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Dairy cows in confinement and pasture-based feeding systems were compared across four spring-calving and three fall-calving replicates for differences in reproduction, mastitis, body weights, and body condition scores. Feeding systems and replicates included both Jersey and Holstein cows. Cows in confinement were fed a total mixed ration, and cows on pasture were supplemented with concentrates and provided baled hay or haylage when pasture supply was limiting. Breeding periods were for 75 d in spring or fall. Reproductive performance did not differ significantly due to feeding system or season. Jerseys had higher conception rates (59.6 vs. 49.5 +/- 3.3%) and higher percentages of cows pregnant in 75 d (78.1 vs. 57.9 +/- 3.9%) than Holsteins. Cows in confinement had 1.8 times more clinical mastitis and eight times the rate of culling for mastitis than did cows on pasture. Jerseys had half as many clinical cases of mastitis per cow as Holsteins. Only 41 +/- 5% of confinement Holsteins remained for a subsequent lactation, starting within the defined calving season compared with 51 +/- 5% of pastured Holsteins and 71 and 72 +/- 5% of Jerseys, respectively. Body weights and condition scores were generally higher for confinement cows than pastured cows, and Jerseys had higher condition scores and lower body weights than Holsteins. In summary, pastured cows had fewer clinical cases of mastitis, lower body condition scores, and lower body weights than confinement cows. Holsteins were less likely to rebreed, had more mastitis, higher culling rates, and lower body condition scores than Jerseys.

J. Dairy Sci. 2002 Jan;85(1):95-104.

Milk production and economic measures in confinement or pasture systems using seasonally calved Holstein and Jersey cows.

White SL, Benson GA, Washburn SP, Green JT Jr.

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This 4-yr study examined total lactation performance of dairy cows in two feeding systems: pasture-based and confinement. Spring and fall calving herds were used and each seasonal herd had 36 cows on pasture and 36 cows in confinement with 282 Holstein and 222 Jersey cows included over seven seasonal replicates. Pasture-fed cows received variable amounts of grain and baled haylage depending upon pasture availability. Confinement cows received a total mixed ration with corn silage as the primary forage. Data were collected on milk production, feed costs, and other costs. Pasture-fed cows produced 11.1% less milk than confinement cows. Across treatments, Jerseys produced 23.3% less milk than Holsteins, but calving season and various interactions were not significant. Feed costs averaged \$0.95/cow per day lower for pastured cows than confinement cows. Feed costs were lower for Jerseys than Holsteins and for cows calving in spring. Income over feed costs averaged \$7.05 +/- 0.34 for confinement Holsteins, \$6.89 +/- 0.34 for pastured Holsteins, \$5.68 +/- 0.34 for confinement Jerseys, and \$5.36 +/- 0.34 for pastured Jerseys; effects of breed were significant but treatment, season, and interactions were not. Economic factors such as labor for animal care, manure handling, forage management, and cow culling rates favored pastured cows. Higher fertility and lower mastitis among Jerseys partially offsets lower income over feed cost compared with Holsteins. Milk production was lower in this

study for pasture-based systems but lower feed costs, lower culling costs, and other economic factors indicate that pasture-based systems can be competitive with confinement systems.

9. "Science-based Decisions" (page 5)

-Decisions based on laws and systems of nature need not be seen as inferior to decisions based on current human run "scientific studies". However, such scientific studies have and are being done on pasture. For example, much work has been done by Dr. Fred Provenza at Utah State as well as by (soon to be Dr.) Darrell Emmick, NRCS Grasslands Specialist in NYS, demonstrating the innate biofeedback abilities of dairy cows and other ruminants to select what their bodies need in terms of energy, protein, and other nutrients while on pasture. We do not need to wait for research and science to make us aware and enlighten us on all the fine points of the animal / environment interactions and benefits to each before we embrace grazing as a right and requirement for all organic ruminants. We just need to embrace and accept that nature knows more than we do and that we must work to incorporate nature into our organic production systems.

10. *Pasture & Parasites*, page 5

"Many in the organic community are calling for the prohibition of Ivermectin because its synthetic production is inconsistent with organic principles. However, there are currently no proven natural alternatives with similar effectiveness. The prohibition of an effective treatment and the increase in infection would lead to decreased animal health."

-The majority of the organic dairy community likely concurs with Aurora that Ivermectin should be disallowed for use in organic dairying.

-Organic dairy farmers all across the country are successfully managing their pastures and cows without the use of Ivermectin. They are using good husbandry, proper pasture management, and good herd management so that parasites are not a health issue.

11. *No prescriptive rules*, page 5, 5th paragraph

"The interpretation of the rule and the implementation of approved farm plans should continue to allow for interpretive vs. prescriptive guidance to accommodate different geographies, climates, soils, local conditions and the like. There should not be prescriptive rules for stocking rates, DMI intake, or period of time."

-There are many prescriptive rules in the standards. They are there to set minimum standards and to prevent abuse. The lack of prescriptive rules has led to the current mandate of the secretary to develop prescriptive rules. Prescriptive rules are needed now to prevent the continued abuse of access to pasture.

12. *"Since the original laws were passed in 1990, the system of individual interpretation by certifier, system, climate and geography has worked effectively for the most part."* (Page 6, paragraph 2)

-It has worked where certifiers are willing to uphold the intent of the Rule, however this non-prescriptive approach has also allowed abuse by some operations and by some certifiers as there have been and are operations where organic dairy cows routinely do not have access to pasture during the grazing season. Unless forced to by prescriptive rules, operations will continue to exist that do not meet the spirit and intent of all ruminants having access to pasture during the grazing season.

13. Organic in the Inter-Mountain West, Page 6, Paragraph 4

"In terms of crops, many feed crops grow well here, especially forage crops, including some of the finest alfalfa hay in the country"

-From the June 2001 NOSB Livestock Committee Pasture Recommendation: "Organic ruminant producers must manage pasture by prioritizing the use of available resources to meet the nutritional, behavioral, and waste recycling requirements of the grazing herd. Land that normally produces stored feed may have to be converted to pasture to maximize pasture for the corresponding herd size.... Organic ruminant producers will have to adapt the composition and size of their herd to the site-specific conditions of their operation."

-Alfalfa can be grazed as well as machine harvested.

14. Natural breeding—"We call upon the NOSB livestock committee to take up the important issue of AI, leading to its prohibition and replacement with natural breeding." Page 6, paragraph 1.

Yes, AI breeding is no where near as natural as bull breeding, but in this area of organic prescriptions, human safety concerns must override requiring what is most natural for the cow. Numerous people are killed and maimed each year by bulls. Although many organic farms do employ the use of bulls in their breeding programs, the danger to human life posed by the use of bulls must never be forgotten. The use of AI must remain available for farms who don't want to put their families, their employees, and themselves in the risky position of dealing with mature breeding bulls. The amount of antibiotic used in AI straws is extremely minute and used purely as a preservative. No one in the organic community, until AOD, appears to be making an issue of this.

-Excessive indoor confinement

Organic farms with tie stall facilities, as required by the Standards, all have to allow their animals periods of access to the outdoors every day except for the narrowly defined temporary exceptions. One plus of tie stalls versus free stalls is that the cow's feet are dry in tie stall barns versus continually in a damp condition because of the manure accumulating on the freestall floors (unless someone has quickly rotating scrapers) which leads to excessive foot growth and the need for frequent foot trimming, something that is seldom required of tie stall/ pastured cows. Tie stalls also allow for more individual attention.

-Environmental sustainability should definitely be a guiding principle in all organic farming. This means things like conscious efforts to reduce the use of fossil fuels and nonrenewable natural resources; designing the farm system so that there is a good fit between the land base and livestock numbers to eliminate the need to import large quantities of feed or export large quantities of manure; careful use of water; and siting of new facilities in areas where water is not scarce. Extensive use of pasture is the number one way for organic dairy production to be environmentally and energy sustainable.

-If Aurora is truly committed to environmental sustainability and committed to significant intake from pasture by all their livestock (page 3 paragraph 1 "*we are developing both short-term and longer-term plans to significantly increase the amount of pasture available to all of our cows at every stage of life and reproduction, including during lactation.*") then AOD should be willing to support a 30% minimum intake for a minimum of 120 days. That only represents 10% of the total annual intake of an animal. Anything less than that is inconsequential. What reason could there be to not support such a low minimum other than a desire to only provide an inconsequential amount of pasture?

